I/WE CLAIM:

1. An ion-assisted electron beam evaporation process, the process comprising the steps of:

positioning multiple high yield fixtures in an array;

adjusting a vertical position of each of the fixtures to compensate for variations in deposition rate versus chamber location;

providing two electron guns;

mounting the guns to a movable track;

positioning the first gun at a source deposition location;

rotating the fixtures at greater than 2400 rpm;

performing ion assisted evaporation with the first gun, the second gun being kept in a stand-by location in pre-heat mode;

ceasing deposition prior to achieving target thickness;

shuttering each of the fixtures at different times;

independently reopening the fixtures to a low rate pulsed deposition to achieve the target thickness;

closing clam shutters on the fixtures;

moving the first gun to a stand-by position;

moving the second gun to the source deposition location;

sampling evaporation with a quartz crystal thickness monitor;

opening a shutter on the second gun;

performing ion assisted evaporation with the second gun, the first gun being kept in a stand-by location in pre-heat mode;

ceasing deposition prior to achieving target thickness;

shuttering each of the fixtures at different times;

independently reopening the fixtures to a low rate pulsed deposition to achieve the target thickness;

closing clam shutters on the fixtures; and,

repeating the process until desired filter is obtained.

2. A method for producing an optical filter utilizing line-of-sight deposition, the method comprising the steps of:

providing multiple substrates;

providing a fixed ion source;

providing at least one selectively movable evaporator;

positioning the at least one evaporator at a source deposition location; and,

depositing material onto the substrates.

3. The method of claim 2, wherein the method further comprises the step of:

shuttering the substrates as necessary to ensure uniform deposition on the substrates.

4. The method of claim 3, where in the method further comprises the step of:

rotating the substrates at approximately greater than 500 revolutions per minute.

5. The method of claim 4, wherein shuttering the substrates as necessary to ensure uniform deposition on the substrates comprises the steps of:

ceasing deposition of a layer prior to achieving target thickness;

shuttering the substrates at different times;

independently unshuttering the substrates; and,

achieving the target thickness.

6. The method of claim 2, wherein the at least one evaporator is at least two selectively movable evaporators, the method further comprising the steps of:

moving the first evaporator to a stand-by position;

opening a shutter on the second evaporator;

positioning the second evaporator at the source deposition location; and,

performing ion assisted evaporation with the second evaporator.

7. The method of claim 6, wherein the method further comprises the steps of:

ceasing deposition of a layer prior to achieving target thickness;

shuttering the substrates at different times;

independently unshuttering the substrates; and,

achieving the target thickness.

8. The method of claim 7, wherein after moving the second evaporator into the source deposition location, the method comprises the step of:

sampling evaporation with a quartz crystal thickness monitor.

9. The method of claim 8, wherein the method further comprises the steps of:

closing clam shutters on the substrates; and,

repeating the process until desired filter is obtained.

10. The method of claim 9, wherein providing multiple substrates comprises the step of:

providing a dense high yield fixture array having multiple, independently shutterable fixtures, each of the fixtures containing multiple substrates.

11. A system for producing optical filters, the system comprising:

multiple substrates;

an ion source;

at least two selectively movable evaporators; and,

a source deposition location.

12. The system of claim 11, wherein the system further comprises:

shuttering means for shuttering the substrates; and,

a vacuum chamber.

13. The system of claim 12, wherein the substrates are rotated at approximately greater than 500 revolutions per minute.

14. The system of claim 13, wherein the substrates are attached to high yield fixtures, the fixtures being independently shutterable.

15. The system of claim 14, wherein the fixtures rotate and are adjustable.

16. The system of claim 15, wherein the system further comprises:

a quartz crystal thickness monitor.

17. The system of claim 16, wherein the evaporators are connected to a movable track, the movable track being opposite the fixtures in the vacuum chamber.

18. The system of claim 17, wherein the vacuum chamber is approximately 60 inches by 80 inches.

19. An optical filter produced by the method of claim 2.

20. The method of claim 4, wherein rotating the substrates at greater than 500 revolutions per minute comprises the step of:

rotating the substrates at greater than 2400 revolutions per minute.

21. The system of claim 13, wherein the substrates are rotated at greater than 2400 revolutions per minute.